DOCUMENT RESUME

ED 241 521 SP 024 007

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TITLE The Effectiveness of Alternative Cancer Education Programs in Promoting Knowledge, Attitudes, and Self-Examination Behavior in a Population of College-Aged Men.
PUB DATE [83]
NOTE 14p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Attitude Change; *Cancer; *College Students; Health Education; Higher Education; Knowledge Level; *Males; Program Effectiveness; Student Attitudes; *Student Behavior
IDENTIFIERS *Self Examinations (Physical); *Testicular Examination

ABSTRACT

A study determined whether changes in knowledge, selected attitudes, and self-examination behavior occurred among college-aged men after exposure to alternative cancer education programs. College-aged men (n=128) from two large health education classes at a mid-western university were randomly assigned to two treatment groups. The first group (control) received an educational program consisting of exposure to pamphlets addressing testicular cancer and testicular self-examination. The second group (experimental) received exposure to an educational program facilitated by an individual who had a history of testicular cancer. At the conclusion of each treatment, subjects responded to an inventory which assessed knowledge and attitudes toward cancer and toward self-examination procedures. Three months later, a questionnaire was sent to each participant requesting information about self-examination behavior subsequent to participation in the program. Conclusions of this study indicate that neither of the treatments is advantageous to the acquisition of knowledge; however, the use of a facilitator with a history of cancer in a cancer education program can influence selected attitudes and improve self-examination behavior. (Author/JMK)

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# THE EFFECTIVENESS OF ALTERNATIVE CANCER EDUCATION PROGRAMS IN PROMOTING KNOWLEDGE, ATTITUDES, AND SELF-EXAMINATION BEHAVIOR IN A POPULATION OF COLLEGE-AGED MEN

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SP024007

ABSTRACT

Statement of the problem: Although many studies have been reported in the literature on the influence of cancer education programs on knowledge, attitudes, and self-examination practice in female populations (breast cancer and breast self-examination), few published reports address such issues related to males. The purpose of this study was to determine whether changes in knowledge, in selected attitudes, and in self-examination behavior occurred among college-aged men after exposure to alternative cancer education programs.

Methodology: One hundred twenty-eight college-aged men from two large health education classes from a mid-western university were randomly assigned to two treatment groups. The first, or control group, received an educational program consisting of exposure to pamphlets addressing testicular cancer and testicular self-examination (TSE). The second, or experimental group, received exposure to an educational program facilitated by an individual who had a history of testicular cancer. At the conclusion of each treatment, subjects responded to a knowledge and an attitudes inventory which assessed knowledge and attitudes toward cancer and toward self-examination procedures. At three months, a questionnaire was sent to each participant requesting information about self-examination behavior subsequent to participation in the programs. Analysis of data was accomplished through the use of ANOVA and Chi Square.

Results and Discussion: Analysis of the results on the knowledge inventory indicated no difference between the two groups in the acquisition of knowledge about cancer or self-examination procedures. Analysis

of the results on the attitudes inventory indicated that the experimental group perceived a "greater likelihood" of developing cancer as a result of exposure to an individual with cancer ($p < .05$) than did the control group. Furthermore, the experimental group reported that testicular self-examination was "of greater value" ($p < .05$) than did the control group. At three-month follow-up, 73.3% of those returning questionnaires reported conducting testicular self-examination subsequent to the participation in the programs (5.0% reported conducting TSE prior to educational programs). Analysis of three-month data regarding frequency of TSE indicated that the experimental group had conducted self-examination more frequently than had the control group ($p < .01$).

Conclusion: Conclusions of this study indicate that neither of the treatments are advantagous to the acquisition of knowledge, however, the use of a facilitator with a history of cancer in a cancer education program can influence selected attitudes and improve self-examination behavior. This study suggests that the use of cancer patients as facilitators be considered when developing and implementing educational programs about cancer where participant attitudes and behavior are of greatest concern.

# THE EFFECTIVENESS OF ALTERNATIVE CANCER EDUCATION PROGRAMS IN PROMOTING KNOWLEDGE, ATTITUDES AND SELF-EXAMINATION BEHAVIOR IN A POPULATION OF COLLEGE-AGED MEN

## STATEMENT OF THE PROBLEM:

Although many studies have been reported in the literature on the influence of cancer education programs on knowledge, attitudes, and self-examination practice in female populations (breast cancer and breast self-examination), few published reports address such issues related to males. An increasingly important issue related to men and recognized by medical authorities is testicular cancer. Although testicular cancer represents only 1% of all malignant neoplasms in the male, it is the most frequent type of cancer reported in late adolescence and early adulthood.[1-3] Unfortunately, many young males are unaware of the existence or potential severity of this type of cancer.[4] Recent advances in the diagnosis and treatment of testicular cancer require that young men be educated about this disease. With early diagnosis and treatment, most testicular cancers show an excellent prognosis. However, with delayed diagnosis, effective treatment becomes difficult and hazardous.[3,5-7] Presently, a significant number of males who are diagnosed with testicular cancer already show evidence of metastases.[8] Advanced disease at diagnosis may be due, in part to three reasons. Firstly, this condition may occur because of the nature of cancer itself (i.e. some testicular cancers are extremely invasive and highly proliferative). Secondly, the condition may progress because of a general lack of awareness among males that cancer can occur in these reproductive structures, and thus males may not examine their testes periodically for abnormalities. And lastly,

even if young men find an abnormality, they may be reluctant to seek early diagnosis and treatment because of their belief that such a disease can not occur to them on account of their relative youth and general high level of health. Increasing awareness among young men about this disease, through educational efforts, is obviously important.

The American Cancer Society (ACS) and other interested parties recently have begun promoting testicular self-examination (TSE) as a means for early detection of signs and symptoms of testicular disease.[9-11] Furthermore, the ACS has published two fact sheets that provide valuable supplements to TSE.[12,13] However, educational strategies tested under experimental conditions which best convey knowledge about testicular disease and promote behavior for practicing TSE are unreported in the literature. To help answer this question, a study was initiated to assess the impact of alternative educational programs on participant knowledge, attitudes, and behavior concerning testicular disease and TSE.

PURPOSE AND METHODS

The purpose of the study was to assess the effect of alternative educational programs on participant knowledge, on selected attitudes and on self-examination behavior about testicular cancer and testicular self-examination (TSE). The sample consisted of 128 males and was obtained from a health science course at a midwestern university during the fall of 1981. Subjects were randomly assigned to one of the two following treatments:

1. A testicular self-examination program which provided information about testicular disease and testicular self-examination through exposure to pamphlets (comparison group).

2. A facilitator conducted testicular self-examination program which provided information about testicular disease and testicular self-examination, delivered by a testicular cancer patient who shared his medical history with the subjects (experimental group).

Information provided in each treatment was devised from testicular disease and TSE material available from the American Cancer Society. Prior to the delivery of each program, subjects were informed of human subject requirements. The design used for this study was a modified post-test only comparison group design in which the comparison group received only exposure to the ACS fact sheets while the experimental group received exposure to information delivered by a cancer patient who shared his medical history with the subjects. A post-test consisting of a 16-item attitudes inventory using Likert scales and adapted with permission from an attitudes inventory made available from the American Cancer Society, was given to both treatments. A second post-test consisting of a 25-question knowledge inventory developed by the investigators was also administered to each group. Finally, a follow-up assessment on frequency of TSE practice was performed through a mailed questionnaire three-months after completion of the educational sessions. Analysis of data was accomplished using Student's t-test and Chi Square.

RESULTS

Of the one hundred and twenty-eight male subjects who participated in this study, only 5% (6) indicated that they had a present program of testicular self-examination. Furthermore, only 42% (54) indicated ever having heard of testicular cancer prior to the exposure to study materials. Analysis of the results on the knowledge inventory indicated no significant differences ($\alpha = .05$) between the two groups in the acquisition of knowledge about cancer or self-examination procedures.

(See Table I). Analysis of the results on the attitudes inventory indicated that:

1. The experimental group perceived a "greater likelihood" of developing cancer as a result of exposure to an individual with cancer ($p < .05$) than did the control group. (See Table II); and
2. The experimental group reported that the exposure to information they received was "of greater value" ($p < .05$) than did the control group. (See Table III).

At three months, a questionnaire was mailed to each program participant. A return rate of 47% (60) was achieved. Of those who returned questionnaires, 73.3% (44) reported conducting testicular self-examination subsequent to the participation in the programs. Analysis of three-month data regarding frequency of TSE indicated that the experimental group had conducted self-examination more frequently ($p < .01$) than had the control group. (See Table IV).

DISCUSSION

The results of this study point to several important observations about the exposure of learners to information delivered by a cancer patient who shared his associated medical history to subjects in an educational program. As indicated by the results of the knowledge inventory, exposure to the cancer patient provides no advantage over the use of pamphlets for the dissemination of the same information (in this case, testicular cancer and testicular self-examination). However, when considering attitudes, advantages in using a cancer patient do emerge. It was found in this study, that the majority of men are not aware of the existence of testicular cancer. Furthermore, it appears that a very small number of young men presently practice testicular self-examination, yet testicular cancer is the most frequent type of cancer seen in young men. Efforts to improve the frequency of testicular self-

examination among this population is beneficial. One method in which behavior can be initiated or enhanced is through attitudinal development. Positive attitudinal development toward cancer and TSE were demonstrated in this study. In regards to the first attitude, this study demonstrated that exposure to a cancer patient caused the subjects (experimental group) to feel more likely that they might develop cancer. To create an attitude that requires individuals to be more realistic about the development of a disease process frequently initiates or enhances behavior that will prevent the disease or lead to early detection. This action is a component of the Health Belief Model, a theoretical framework which helps to explain individual behavior related to health and disease.[14]

A second attitude which was elicited in significantly higher frequency in the experimental group (exposed to the cancer patient) related to the value of exposure to the information in promoting testicular self-examination. After exposure to the cancer patient, the experimental group responded significantly more favorably about the value of their experience than did the control group whose only exposure was to pamphlets.

On three-month follow-up, nearly three-fourths of those returning questionnaires reported having conducted TSE. On examination of the frequency with which TSE was performed during the three-month interval, greater frequency was observed in the experimental group. From this data it would appear that when considering the development and implementation of educational programs about testicular cancer for young males, exposure to a cancer patient and his associated medical history is more advantageous in impacting testicular self-examination behavior than is exposure only to pamphlets.

References

1. Einhorn LH, Donohue J: Cis-diaminedichloroplatinum, vinblastine and bleomycin combination chemotherapy in disseminated testicular cancer. An Intern Med 87:293-298, 1977.
2. Schottenfeld D, Warshauer ME, Sherlock S, et al.: The epidemiology of testicular cancer in young adults. Am J Epidemiol 112:232-246, 1980.
3. Javadpour N: Germ cell tumor of the testis. CA 30:242-255, 1980,
4. Marty PJ, McDermott RJ: Effects of a cancer education program on attitudes and knowledge among college-aged men. Paper presentation at the Annual Meeting of the Central District Alliance for Health, Physical Education, Recreation and Dance. Sioux Falls, SD, 1982.
5. Donohue JP, Einhorn LG, Perez JM: Improved management of nonseminomatous testis tumors. Cancer 42:2903-2908, 1978.
6. Einhorn LH, Williams SD: Current concepts in cancer. N Engl J Med 300:289-291, 1979.
7. Fraley FE, Lange PH, Kennedy BJ: Germ cell testicular cancer in adults. N Engl J Med 301:1420-1426, 1979.
8. Culp DA, Boatman DL, Wilson VB: Testicular tumors: 40 years' experience. J Urol 110:548-553, 1973.
9. Garnick MB, Mayer RJ, Richie JP: Testicular self-examination. N Engl J Med 302:297, 1980.
10. Marty PJ, McDermott RF: Teaching about testicular cancer and testicular self-examination. J School Health 53:351-356, 1983.
11. Luther S, Flynn A, Montie J, et al.: Breast and testicular self-exams. Cleveland, OH: Cleveland Clinic Cancer Center. 1981.
12. American Cancer Society: How to examine your testes. (no date).
13. American Cancer Society: Facts on testicular cancer. (no date).
14. Becker MH (ed.): Personal health behavior and the health belief model. Thorofare, NJ: C.B. Slack, Inc., 1974.

TABLE I

RESULTS OF KNOWLEDGE INVENTORY (n =128)

| | NUMBER | $\overline{X}$ | S.D. | F VALUE | 2 TAILED PROB | |
|---|---|---|---|---|---|---|
| GROUP EXP | 58 | 20.41 | 2.31 | 1.31 | .290 | N.S. |
| CONT. | 70 | 20.81 | 2.66 | | | |

TABLE II

VALUE OF SEMINAR IN PROMOTING TSE (n=120)

RESPONSES

| GROUP | GREAT VALUE | MODERATE VALUE | LITTLE VALUE | NO VALUE | |
|---|---|---|---|---|---|
| EXP. | 57.4% (31) | 38.9% (21) | 3.7% (2) | 0% | n-54 |
| CONT. | 34.8% (23) | 51.5% (34) | 10.6% (7) | 3.0% (2) | n=66 |

(SIGNIFICANCE @ $P < .05$)

TABLE III

POSSIBILITY OF DEVELOPING CANCER (n=124)

| GROUP | RESPONSES: FAIRLY LIKELY | NOT TOO LIKELY | NOT LIKELY | OTHER | |
|---|---|---|---|---|---|
| EXP. | 30.4% (17) | 64.3% (36) | 5.4% (3) | .0% | n=56 |
| CONT. | 13.2% (9) | 72.1% (49) | 11.8% (8) | 2.9% (2) | n=68 |

(SIGNIFICANCE @ $P < .05$)

TABLE IV

NUMBER OF TIMES COMPLETED TSE IN LAST THREE MONTHS (n=44)

| GROUP | ONE | TWO | THREE | MORE THAN THREE | |
|---|---|---|---|---|---|
| EXP. | 16.7% (4) | 62.5% (15) | 4.2% (1) | 16.7% (4) | n=24 |
| CONT. | 40.0% (8) | 20.0% (4) | 35.0% (7) | 5.0% (1) | n=20 |

(SIGNIFICANCE @ $P < .01$)